



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,322	08/02/2005	Gordon Cook	4140-0111PUS1	9223
2292 7590 04/23/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
LEE, CLOUD K				
ART UNIT		PAPER NUMBER		
3753				
NOTIFICATION DATE		DELIVERY MODE		
04/23/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/511,322

**Applicant(s)**

COOK ET AL.

**Examiner**

CLOUD K. LEE

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The Final Rejection mailed on 10/18/07 has been withdrawn. This Office Action is a Non-Final Rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-5 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Heiser (US Patent No. 4,056,965).

Heiser discloses a valve comprising a valve body (38) having an inlet (32) and outlet (28) ports for fluid flow from a fluid pressure source, a valve seal (56, see figure 2) mounted between the inlet and outlet ports, the valve seal having a flexible valve closure member constrained to engage a valve seat (48) in the closed position of the valve, a control port (62) in the valve body for providing a control fluid acting to maintain the valve closure member in the closed position under a pressure differential as between that applied to one side of the closure member by said fluid flow through the inlet port acting to lift the closure member off (see figure 2 and also see Col 4 lines 59-64) the valve seat, and that applied on the other side of the closure member through said control port to close the valve, and control means for varying said differential pressure to control movements of the valve closure member and regulate fluid flow through the

valve. The conduit is circular in cross section (see cross section figure 3) and the valve seat (48) in the form of a sphere (the valve seat is in the form of a sphere from a cross section view) and larger cross section than the cross section of the circular conduit. Heiser also discloses a fluid reservoir (118) in communication with the control port to supplement the pressure in the annular space, a switch (the valve in tank 64) being actable periodically to vent and re-pressurize the reservoir and annular space through the control port to open and close the valve.

Regarding claim 10, Heiser discloses the valve seal (56) is formed between an inner wall of a flexible conduit (see figure 2, the flexible seal 56 is a flexible conduit) acting as the flexible valve closure member for fluid flow between the inlet (32) and outlet (28) and a valve seat (48) mounted within the conduit to engage the inner wall of the flexible conduit in the closed position of the valve.

Regarding claim 4, please see second embodiment shown on figure 4. Heiser discloses a valve comprising a valve body (38a) having an inlet (32a) and outlet (28a) ports for fluid flow from a fluid pressure source, a valve seal (56a, see figure 4) mounted between the inlet and outlet ports, the valve seal having a flexible valve closure member constrained to engage a valve seat (48a) in the closed position of the valve, a control port (62a) in the valve body for providing a control fluid acting to maintain the valve closure member in the closed position under a pressure differential as between that applied to one side of the closure member by said fluid flow through the inlet port acting to lift the closure member off (see figure 4 and also see Col 6 lines 37-48) the valve seat, and that applied on the other side of the closure member through said control port to close the valve, and control means for varying said differential pressure to control movements of the valve closure member and regulate fluid flow through the valve. The valve seal is formed

between the outer wall of a flexible conduit (see figure 4) for fluid flow between the inlet and outlet ports and an abutting protuberance (48a) in a passageway for fluid flow in the valve body between the inlet and outlet ports.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heiser in view of Kreeley (US Patent No. 4,300,748).

Heiser fails to disclose a fluid flow to the valve is fed to the inlet and control ports of the valve so that equal pressure is applied to either side of the valve closure member to close the valve, said control means including a restrictor valve in the flow of fluid to the control port to

supply a sufficient amount of fluid adequately to pressurize the annular space in a predetermined time, and a normally closed switch actable to vent the annular space and reduce pressure in the annular space whereby to open the valve, a fluid reservoir in communication with the control port to supplement the pressure in the annular space, a feedback valve between the control port and the outlet port.

Kreeley discloses a fluid flow to the valve is fed to the inlet (33) and control ports (39) of the valve so that equal pressure is applied to either side of the valve closure member to close the valve, said control means including a restrictor valve (48) in the flow of fluid to the control port to supply a sufficient amount of fluid adequately to pressurize the annular space in a predetermined time, a feedback valve (lines 52 and 54 to valve 56) between the control port and the outlet. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided a valve is fed to the inlet and control port in order to reduced pressure in line 45 which causes the valve open to permit fluid flow from the inlet region to the outlet region as taught by Kreeley. (see Col 4 lines 34-49)

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heiser in view of Kreeley (US Patent No. 4,300,748) as applied to claim 8 above, and further in view of Tucker et al (US Patent No. 6,568,416).

The modified Heiser fails to disclose a primary valve with the feedback valve being a secondary valve.

Tucker et al disclose a two-ways valve (29) is defined as both primary and secondary valve, wherein the secondary valve vented to atmosphere (see Col 8 lines 2-7). It would have

Art Unit: 3752

been obvious to one having ordinary skill in the art at the time the invention was made to have provided a two-ways valve in order to discharge the pressure and control the pressure of the system as taught by Tucker et al. (see Col 8 lines 2-7)

### ***Response to Arguments***

7. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLOUD K. LEE whose telephone number is (571)272-7206. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571)272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CL

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752